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NORBERT KANTER

TEACHERS AND MUSEUM KNOWLEDGE MW2002 Conference Boston

MAI Tagung – Düsseldorf 23. Mai 2002

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- ▶ MUSEUMS AND THE WEB 2002
17. – 20. April, Boston, USA

- ▶ EDU SESSIONS
„Learning in Theory and Practice“
„Teachers and Museums“

- ▶ ArtsConnectEd
„Pyramid Power: A Train-the-Trainer Model to Increase
Teacher Usage of the ArtsConnectEd On-line Resource“

- ▶ BEST OF THE WEB 2002
Best Museum Web Site Supporting Educational Use

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17. – 20. April, Boston, USA

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1 MUSEUMS AND THE WEB 2002



über 600 Teilnehmer
über 230 Veranstaltungen unterschiedlicher Kategorien
über 30 Aussteller
über 25 Jurymitglieder des „Best of the Web Awards“

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1 MUSEUMS AND THE WEB 2002

WORKSHOPS...

- Handhelds in Museums
- QuickTime Virtual Reality in Cultural Heritage Presentation
- Web Marketing: Strategies for Using Digital Media
- E-learning
- Goal-Based Scenarios for Effective Web Education
- Innovative Interfaces for Museum Content
- Systematic Requirements Analysis for Building Effective Web Sites
- Usability Engineering: High-Speed, Low-Cost User Testing for Museums on the Web
- Web Video
- Web-Based Metadata Harvesting and the Open Archives Initiative Protocol
- Museum and heritage applications of digital 3D imaging
- Content Management Systems
- Technologies for Interactive Exhibit Design: from Wireless object and body tracking to wearable computers

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1 MUSEUMS AND THE WEB 2002

SESSIONS...

- Digital Curation
- Evaluation Frameworks
- Integrated Publishing
- Learning in Theory and Practice
- Standards in Action
- Teachers and Museums
- Touching the Virtual
- Content Management
- Evaluation Experience
- My Web, My Way
- The Enhanced Gallery
- Experiencing Complex Data
- Thinking Big
- World Cultures, World Strategies
- Real Access, Virtual Guides
- Exhibit Design as Experience Design

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1 MUSEUMS AND THE WEB 2002

MINIWORKSHOPS...

- Design
- E-Mail Marketing
- How Small Institutions Implement Large Web Sites
- Project Management
- Networked multi-sensory experiences
- Accessibility
- Digital Rights Management
- Image File Formats
- Resource Description Framework
- Broadband Programming
- Museophile
- E-Docents
- Performance to Web
- MuseDoma

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1 MUSEUMS AND THE WEB 2002

UND...

- ...Usability Lab
- ...Crit Rooms
- ...Demonstrations
- ...Exhibition
- ...Best of the Web Awards

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2 EDU SESSIONS



- ▶ *2001: A Cyberspace Odyssey*
National Gallery of Art, Washington, USA
<http://www.nga.gov>
- 2-jähriges Projekt (Ende April 2002)
- Ziel: Lehrer entwickeln Online-Materialien für das K-12 Curriculum zur Platzierung auf der NGA Website
- Verfahren: Auswahl von 3er-Teams, die in 8-monatigen Teilprojekten Inhalte konzipieren/produzieren (12 Teams wurden zusammengestellt)
- „Annual Summer Teacher Institute“
einwöchige Seminare im Museum
(Lehrer + Museumspädagogen + Web-Master)
- „Stipendien“ pro Lehrer: \$ 1.500
- Evaluation und Befragungen stehen noch aus
- Neue Sommerkurse in 2002 geplant

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2 EDU SESSIONS



- ▶ *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*
Educational Web Adventures LLP, USA
The Franklin Institute Science Museum, Philadelphia, USA
<http://www.eduweb.com>

- Studie zum Lernverhalten in Online-Umgebungen
- Es wurden „User Exit Surveys“ und Server-Statistiken ausgewertet (auf Servern von 5 Museen)
- 6 Typen zur Unterscheidung von „Educational Material“:

Creative Play

Guided Tour

Interactive Reference

Puzzle / Interactive Mystery

Role-playing Story

Simulation .

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

	Type	Name	Host Site	Number
Activity Sites				
	Creative Play	A Brush with Wildlife	Nat. Museum of Wildlife Art	50
	Interactive Reference	Study Art	Sanford	50
	Puzzle/Mystery	Leonardo's Workshop	Sanford	50
	Role-playing Story	In Search of the Ways of Knowing Trail	Brookfield Zoo	50
	Simulation	Modeling Marine Ecosystems (subscription site)	JASON Project	50
Control Site				
	Control	Web Adventure directory page	Educational Web Adventures	299

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

Program Type	Percents	
	Activity Sites	Control
Creative Play	24	18
Guided Tour	8	9
Interactive Reference	23	18
Puzzle/ Mystery	15	19
Role-playing Story	21	18
Simulation	9	18
Totals	100	100

Bevorzugte Art der "Online-Lern-Erfahrung"

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

Program Type	Percents		Percents			
	Adults	Children	Adult Males	Adult Females	Boys	Girls
Creative Play	9	31	10	8	33	31
Guided Tour	15	5	15	15	4	6
Interactive Reference	40	14	25	46	11	16
Puzzle/Mystery	13	17	20	10	14	19
Role-playing Story	16	23	25	13	29	19
Simulation	7	10	5	8	10	10
Totals	100	100	100	100	100	100

Beliebtste Anwendung nach Alter und Geschlecht

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

	Percents				
	Creative Play	Interactive Reference	Puzzle/Mystery	Role-playing	Simulation
Assigned by teacher	69	16	26	28	77
Personal interest	6	20	28	38	5
Professional interest	10	8	6	6	2
Recommended by friend	2	0	2	2	0
Recommended by parent	0	0	4	4	2
To use in a lesson	10	36	17	9	5
Other*	2	20	17	13	9
Totals	100	100	100	100	100

Grund für die Aktivität

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

	Percents				
	Creative Play	Interactive Reference	Puzzle/Mystery	Role-playing	Simulation
Finished it	60	54	48	75	45
Got bored	9	4	21	9	23
Got confused	2	0	5	2	10
Ran out of Time	24	20	18	9	10
Other*	4	22	9	6	13
Totals	100	100	100	100	100

Warum wurde die Site verlassen?

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2 EDU SESSIONS

- *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

Program Type	Ideal Time	Mean Time	Mean Time 2* (minus outliers)	Percent of Ideal (Mean 2/Ideal)
Creative Play	21 min	6 min 19 sec	7 min 48 sec	37
Interactive Reference		7 min 25 sec	7 min 54 sec	--
Puzzle/Mystery	20 min	5 min 29 sec	7 min 42 sec	38
Role-playing Story	19 min	7 min 46 sec	12 min 24 sec	65
Simulation	25 min	16 min 40 sec	14 min 42 sec	59**

*Outliers (under 8 seconds or an hour or more) are eliminated.

** This activity required written journal entries.

Verweildauer auf der Site

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2 EDU SESSIONS

▶ *How Do You Like To Learn? Comparing User Preferences and Visit Length of Educational Web Sites*

Einige Ergebnisse der Auswertungen

- „Guided Tour“ hat am wenigsten Resonanz erhalten
- Erwachsene bevorzugen „Interactive Reference“
- Kinder bevorzugen „Creative Play“ und „Role-playing“

ergo:

- Zielgruppen Erwachsene / Kinder müssen unterschieden werden
- Wichtig ist es, zwischen determiniertem Ziel und „kreativem“ Ergebnis einer Online-Aktivität zu unterscheiden .

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2 EDU SESSIONS



- ▶ *Digital Primary Source Materials in the Classroom*
University of Illinois at Urbana-Champaign, USA
<http://images.library.uiuc.edu/projects/tdc>
- Projekt zur Integration von digitalem Material in das Curriculum (K-12) und die Arbeit der Museumspädagogik
- Projektstart 2001 „Teaching with Digital Content“ (TDC)
- 10 Partner in Illinois – Museen und Bibliotheken, die digitalisiertes Material in eine zentrale Datenbank liefern (DC) – abgestimmt auf Lehrpläne der Schulstufen.
- Einwöchiges „Summer Institute“ für Lehrer (Software-Training, Schulung); Workshops für Lehrer, Museumsfachleute und Lehrer, Kuratoren und Lehrer und Bibliothekare
- Ziele:
die Definition von kollaborativen Online-Umgebungen für „Bildung“ und Zusammenarbeit von Schulen & Museen & Bibliotheken .

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2 EDU SESSIONS



- ▶ *Think Globally, Act Locally: The Role of Real Teachers in Community Science Issues*
Science Museum, London, UK
The Franklin Institute Science Museum, Philadelphia
<http://www.fi.edu>

- Projektstart 2001: US-UK Projekt zwischen den Pädagogen der Science Museen (OME – On-line Museum Educators)
- Themen: Gesundheit, Energie, Wasser
- Zielgruppe High-School in US / Post-16 in UK
- 1. OME-Projekt: Erarbeitung von Online-Materialien zu je einem bestimmten Museumsobjekt („Pieces of Science“)
Ziel: Content Creation
- 2. OME-Projekt (ab August 2001):
Zusammenarbeit, Wissenschaftsprojekte, Diskussionen, Interaktion, eMail, Foren, Videokonferenzen
Ziel: Collaboration, Community

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3 ARTSCONNECTED



- ▶ *„Pyramid Power: A Train-the-Trainer Model to Increase Teacher Usage of the ArtsConnectEd On-line Resource”*

Ein Projekt von:

The Minneapolis Institute of Arts
Walker Art Center, Minneapolis

www.artsconnected.org

Voraussetzungen

- beide Museen arbeiten intensiv online seit 1995
- beide Museen erarbeiten seit 1995 Lehr-Materialien
- die Zusammenarbeit begann mit einem gemeinsamen Mailing
- Digitalisierungen für AMICO begannen 1996
- 1997 offerierte das Minnesota Office of Technology ein Budget
- 1997 wurde IAIA (Integrated Art Information Access Projekt) zwischen WAC und MIA gegründet
- Mai 1998 wurde IAIA in ArtsConnectEd umbenannt .

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3 ARTSCONNECTED



- ▶ *„Pyramid Power: A Train-the-Trainer Model to Increase Teacher Usage of the ArtsConnectEd On-line Resource”*

Inhalte der Plattform

- Zugriff auf Sammlungen, Bibliotheken und Archive des Walker Art Center und des Minneapolis Institute of Arts
- Texte, digitale Bilder, Audio und Video, Animationen, VR
- Zahlreiche „Online Lesson Plans“ und „Curriculum Units“
- Interaktive Anwendungen / Übungen / Spiele
- Weiterführende Links

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3 ARTSCONNECTED



- ▶ *„Pyramid Power: A Train-the-Trainer Model to Increase Teacher Usage of the ArtsConnectEd On-line Resource”*

Ziele von ArtsConnectEd

- Gemeinsame Plattform für Lehrer / Schüler / Eltern
- 24/7 Lieferbarkeit von Materialien und Informationen
- Promotion der Museumssammlungen und der Arbeit der Museen

Ziele des Train-the-Trainer Projektes

- Flächendeckende Ausbildung von Lehrern (im ganzen Bundesstaat)
- Werbung für ArtsConnectEd als Informationsplattform in Schulen
- Unterstützung von Lehrern im Umgang mit Online-Medien .

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3 ARTSCONNECTED



▶ Das Train-the-Trainer Modell

Beginn 2001

- 1 „Lead-Trainer“ bildet 24 „Trainers-Trained“ aus.
- Jeder der 24 „Ausbilder“ hält 4 Workshops mit je 15 Lehrern („Teachers Trained“).
- Jeder der Lehrer kann ca. 30 Schüler in ArtsConnectEd Projekten involvieren .

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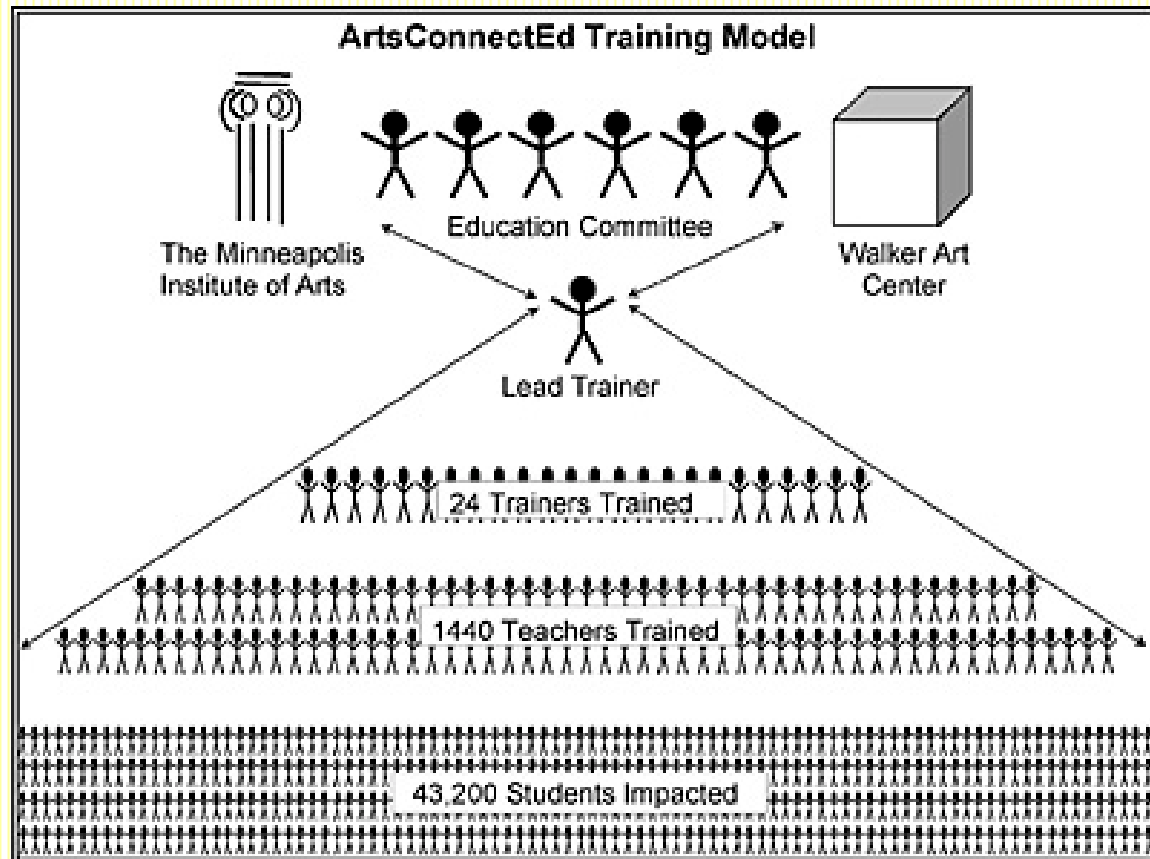
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3 ARTSCONNECTED

► Das Train-the-Trainer Modell



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3 ARTSCONNECTED



▶ Das Train-the-Trainer Modell

- Die 24 Lehrer-Trainer mussten:
 - sich bewerben
 - 24 Monate am Projekt teilnehmen
 - im ersten Jahr 3 ganztägige und 1 halbtägigen Workshop in den Museen absolvieren
 - im zweiten Jahr 4 dreistündige Workshops mit je 15 Lehrern abhalten
- Die 24 Lehrer-Trainer bekamen:
 - einen Mac G3 Powerbook
 - \$ 600 für das erste Jahr plus Reisespesen
 - \$ 200 für jeden Workshop im zweiten Jahr
 - \$ 500 Material-Budget

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3 ARTSCONNECTED

▶ Ausbildungsziele – im ersten Jahr (2001)

1. Workshop

- Increase trainers' computer competence, particularly with their Macintosh Powerbooks.
- Effectively communicate the basic structure and uses of ArtsConnectEd.
- Build a learning community between the two subgroups of twelve trainers.
- Begin to build bridges of understanding between the cultures of the museum and the classroom.
- Promote an attitude of professionalism and accountability.
- Acquire trainers' commitment to use of threaded discussion list software.
- Reinforce the trainers' commitment to use ArtsConnectEd with their students.



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3 ARTSCONNECTED

▶ Ausbildungsziele – im ersten Jahr (2001)

2. Workshop

- Continue to build bridges of understanding between the cultures of the museum and the classroom.
- Develop criteria for effective classroom use of ArtsConnectEd based on classroom trials with students.
- Brainstorm a list of task ideas with trainers based on classroom trials with students.
- Align task ideas with the Minnesota Graduation Standards using SPACE chart tool.
- Communicate a procedure for each trainer to write a draft of a task using ArtsConnectEd in a K-12 classroom.



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3 ARTSCONNECTED

▶ Ausbildungsziele – im ersten Jahr (2001)

3. Workshop

- Continue to build bridges of understanding between the cultures of the museum and the classroom.
- Evaluate 24 classroom tasks that demonstrate effective classroom use of ArtsConnectEd.
- Demonstrate set-up and use of LCD projector.
- Define role of ArtsConnectEd trainers in marketing plan.
- Define procedures for reporting on workshops completed during year two.



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3 ARTSCONNECTED

- ▶ Schuljahr 2001/2002
 - 100 Veranstaltungen sind geplant (davon 75 schon gehalten)

- ▶ Planung 2002
 - Trainer können sich für ein „Summer Museum Fellowship“ bewerben
 - „Higher Education Symposium“
 - „Advanced Regional Workshops“

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3 ARTSCONNECTED

▶ Bisherige Ergebnisse / Erkenntnisse

- Lehrer benötigen professionelle Weiterbildung
- Lehrer wurden zu „Museums-Fans“
- Langfristig muss eine Betreuung gewährleistet werden können



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3 ARTSCONNECTED



▶ Das Team

- ACE Team:

Minneapolis Institute of Art	11 Personen
Walker Art Center	8 Personen
Externe und Volunteers	9 Personen

- Curatorial Researcher
 Manager of Teacher Resources
 Digital Imaging Specialist
 Photography Technician
 Classroom Materials Specialist
 Education Specialist
 Web Designer
 Systems Analyst
 Usability Consultant

- Sponsoren:
 MCIWorldcom, Live Picture, Sovereign Hill Software, Microsoft

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3 ARTSCONNECTED

▶ Das ArtsConnectEd-Budget

- für Digitalisierung
- Content-Entwicklung
- Lehrer-Ausbildung

\$ 3 Mio.

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4 BEST OF THE WEB 2002

- ▶ Best Museum Web Site Supporting Educational Use:

OLogy

American Museum of Natural History, New York, USA

<http://www.ology.amnh.org>

- ▶ Best Overall Museum Web Site:

The Sport of Life and Death: The Mesoamerican Ballgame

National Endowment for the Humanities

Mint Museum of Art, Charlotte, USA

National Endowment for the Arts

Rockefeller Foundation

<http://www.ballgame.org>



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ANHANG - LINKS

Museums and the Web 2002 Conference in Boston, 17. - 20. April 2002

<http://www.archimuse.com/mw2002>

*Pyramid Power: A Train-the-Trainer Model to Increase Teacher Usage
of the ArtsConnectEd On-line Resource*

Minneapolis Institute of Arts, USA
Walker Art Center, Minneapolis, USA

<http://www.artsconnected.org>

*Think Globally, Act Locally: The Role of Real Teachers in Community
Science Issues*

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2001: A Cyberspace Odyssey
National Gallery of Art, Washington, USA

<http://www.nga.gov>

*How Do You Like To Learn? Comparing User Preferences and Visit
Length of Educational Web Sites*

Educational Web Adventures LLP, USA
The Franklin Institute Science Museum, Philadelphia, USA

<http://www.eduweb.com>

Learning by Design: Teachers / Museums / Technology
University of British Columbia, Vancouver, Canada
University of Illinois at Urbana-Champaign, USA

Beispiele:

<http://www.seattleartmuseum.org>

<http://www.exploratorium.edu/IFI/index.htm>

<http://CyberMuse.gallery.ca/ng/>

http://national.gallery.ca/education/school/index_e.html

Best of the Web Awards 2002

Best Museum Web Site Supporting Educational Use:
OLogy

American Museum of Natural History, New York, USA
<http://www.ology.amnh.org>

Best Overall Museum Web Site:

The Sport of Life and Death: The Mesoamerican Ballgame

National Endowment for the Humanities

Mint Museum of Art, Charlotte, USA

National Endowment for the Arts

Rockefeller Foundation

<http://www.ballgame.org>

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